

## 4.10 Inlet Sediment Trap

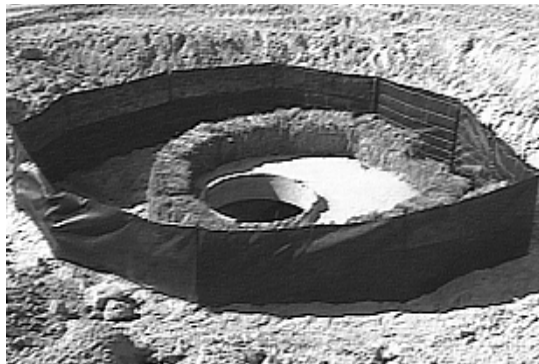
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### Definition

A temporary protective device formed around or installed in a storm drain drop inlet to trap sediment.

### Purpose

An inlet sediment trap is used to prevent sediment from leaving the site or from entering storm drainage systems, prior to permanent stabilization of the disturbed area.



### Conditions

Sediment traps should be installed in or around all storm drain drop inlets that receive runoff from disturbed areas. Outlet protection should be installed below storm drain outlets to prevent scouring.

### Design Criteria

Many sediment filtering devices can be designed to serve as temporary sediment traps. Examples are shown in the following figures. Where excavation is to be used, it shall be one in combination with a sediment filter such as stone or silt fence. All excavated sediment traps should provide a minimum of 1.5 feet of sediment storage. Sediment traps must be self-draining unless they are otherwise protected in an approved fashion that will not present a safety hazard.

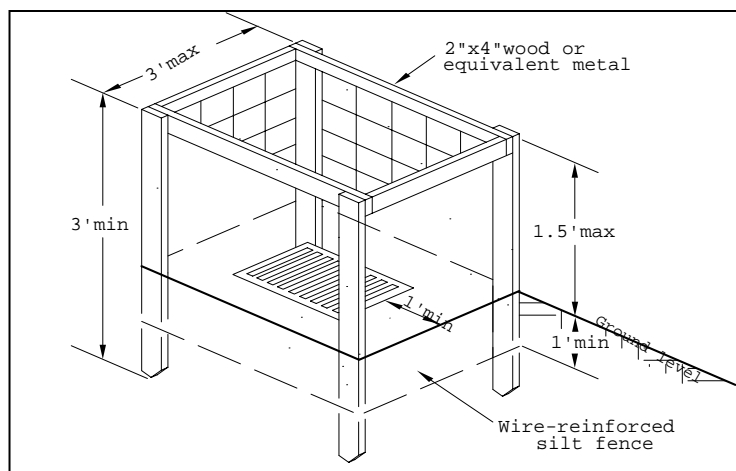


Figure 4.10.1 Fabric and Supporting Frame for Inlet protection.

For block and gravel drop inlet protection as shown in Figure 4.10.2, lay one block on each side of the structure on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2-inch by 4-foot wood studs through block opening. Carefully fit hardware cloth or comparable wire mesh with ½-inch openings over all block openings to hold gravel in place. Use clean gravel placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. The DOT No. 57 washed stone is recommended.

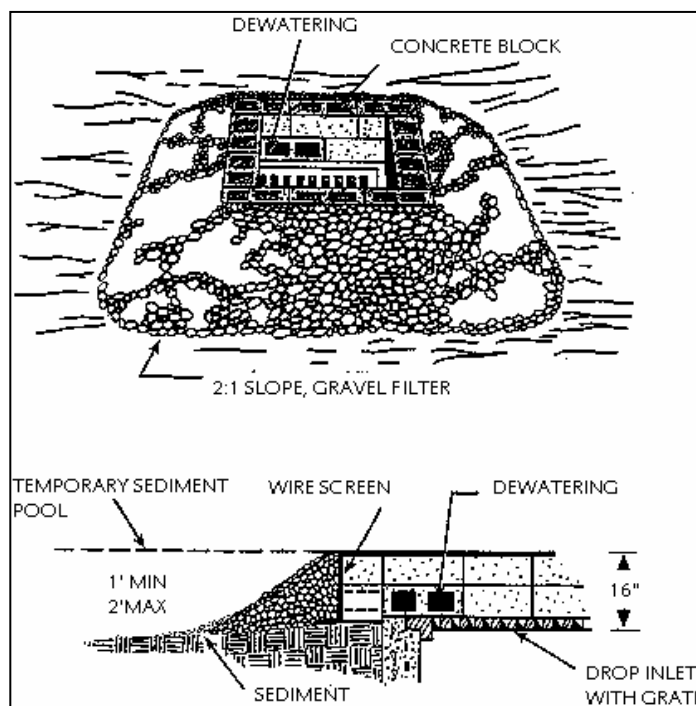


Figure 14.10.2 Block and Gravel Drop Inlet Protection Installation Requirements

For gravel drop inlet protection as shown in Figure 4.10.2, stone and gravel are used. Keep the slope toward the inlet no steeper than 3:1. Leave a minimum 1-foot-wide level stone area between the structure and around the inlet to prevent gravel from entering the inlet. On the slope toward the inlet, use stones 3 inches in diameter and larger. On the slope away from the inlet, use ½- to ¾-inch gravel (No. 57 washed stone) at a minimum thickness of 1 foot.

### Construction Specifications

Sediment traps may be constructed on natural ground surface, on an excavated surface, or on machine-compacted fill provided they have a non-erodible outlet. Manufactured traps are also available for installation in drain inlet structures or as stand-alone tanks.

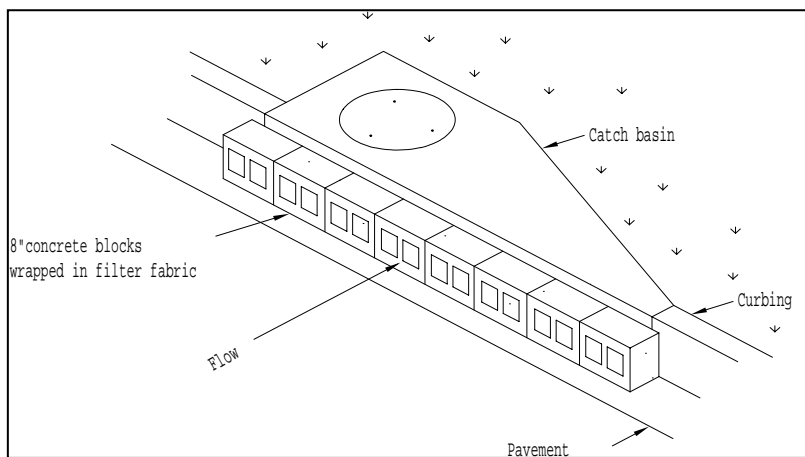


Figure 4.10.3 Curb Inlet Filter Installation Requirements

### Maintenance

Inspect the trap after each rainfall and make repairs as needed. The traps must also be checked at the end of each working day and repaired or cleaned as necessary to ensure proper function.

Remove sediment as necessary to provide adequate storage volume for subsequent rains. When the contributing drainage area has been adequately stabilized, remove all materials and any unstable soil and either salvage it or dispose of it properly. Bring the disturbed area to proper grade, then smooth and compact it. Appropriately stabilize all bare areas around the inlet.